

Amendments to the Claims

We claim:

1. (Currently amended) An isolated recombinant ~~purified~~ CA125 molecule, comprising:

(a) an extracellular amino terminal domain, comprising amino acids ~~#1-1637~~ ~~#1-33~~ of SEQ ID NO: 299, ~~amino acids #34-1593~~ of SEQ ID NO: 299, ~~amino acids #1594-1605~~ of SEQ ID NO: 299, ~~amino acids #1606-1617~~ of SEQ ID NO: 299, and ~~amino acids #1618-1637~~ of SEQ ID NO: 299;

(b) a multiple repeat domain comprising residues 3200 to 3355 of SEQ ID NO: 162 ~~SEQ ID NO:150~~; and

(c) a carboxy terminal domain comprising ~~a transmembrane anchor with a short cytoplasmic domain, and further comprising~~ amino acids ~~#1-284~~ ~~#1-11~~ of SEQ ID NO: 300; ~~amino acids #12-33~~ of SEQ ID NO: 300; ~~amino acids #34-82~~ of SEQ ID NO: 300; ~~amino acids #83-133~~ of SEQ ID NO: 300; ~~amino acids #134-156~~ of SEQ ID NO: 300; ~~amino acids #157-212~~ of SEQ ID NO: 300; ~~amino acids #213-225~~ of SEQ ID NO: 300; ~~amino acids #226-253~~ of SEQ ID NO: 300; and ~~amino acids #254-284~~ of SEQ ID NO: 300.

2. (original) The CA125 molecule according to claim 1, wherein N-glycosylation sites of the amino terminal domain marked (x) in FIG. 8B are encoded at positions #81, #271, #320, #624, #795, #834, #938, and #1,165 in SEQ ID NO: 299.

3. (original) The CA125 molecule according to claim 1, wherein the serine and threonine O-glycosylation pattern for the amino terminal domain is marked (o) in SEQ ID NO: 299 in FIG. 8B.

4. (canceled).

5. (previously presented) The CA125 molecule according to claim 1, wherein the multiple repeat domain comprises 156 amino acid repeat units which comprise epitope binding sites.
6. (previously presented) The CA125 molecule according to claim 5, wherein the epitope binding sites are located in the C-enclosure at amino acids #59-79 (marked C-C) in SEQ ID NO: 150 in FIG. 5.
7. (previously presented) The CA125 molecule according to claim 5, wherein the 156 amino acid repeat unit comprises O-glycosylation sites at positions #128, #129, #132, #133, #134, #135, #139, #145, #146, #148, #150, #151, and #156 in SEQ ID NO: 150 in FIG. 5.
8. (previously presented) The CA125 molecule according to claim 5, wherein the 156 amino acid repeat unit comprises N-glycosylation sites at positions #33 and #49 in SEQ ID NO: 150 in FIG. 5.
9. (previously presented) The CA125 molecule according to claim 5, wherein the 156 amino acid repeat unit comprises at least one conserved methionine (designated M) at position #24 in SEQ ID NO: 150 in FIG. 5.
10. (Currently amended) The CA125 molecule according to claim 1, wherein a the transmembrane anchor of the carboxy terminal domain is located at positions #230-252 (underlined) in SEQ ID NO: 300 of FIG. 9B.
11. (Currently amended) The CA125 molecule according to claim 1, wherein a the cytoplasmic domain of the carboxy terminal domain comprises a highly basic sequence adjacent to the transmembrane anchor at positions #256-260 in SEQ ID NO: 300 of FIG. 9B, serine and threonine phosphorylation sites at positions #254, #255, and #276 in SEQ ID NO: 300 in FIG. 9B, and tyrosine phosphorylation sites at positions #264, #273, and #274 in SEQ ID NO: 300 of FIG. 9B.

12-36. (canceled)

37. (withdrawn) The purified CA125 molecule of claim 1, wherein the multiple repeat domain comprises multiple repeat units, wherein each repeat unit comprises amino acids #1-42 in any of SEQ ID NOS: 164 through 194; at amino acids #43-65 in any of SEQ ID NOS: 195 through 221; amino acids #66-123 in any of SEQ ID NOS: 222 through 249; amino acids #124-135 in any of SEQ ID NOS: 250 through 277; and amino acids #136-156 in any of SEQ ID NOS: 278 through 298.